

## **ABSTRACT OF THE DISCLOSURE**

2           RF spectrum and FM characteristics of an SSC clock signal is measured with a high speed  
single-bit test channel that can be present in the Agilent 93000 SOC System. Such a channel can be  
4           configured to measure, at up to 2.5 Gbps, the logical value of an input signal applied thereto. The SSC  
clock of interest is applied to one of the high-speed single-bit test channels. A conventional FFT (Fast  
6           Fourier Transform) is performed on the captured data to discover the aggregate nature of the distributed  
spectral components, which can then be compared with associated specifications. The captured data is  
8           applied to another algorithm to find the FM modulation profile. That algorithm involves operating on  
captured digital data to perform a frequency translation operation (equivalent to heterodyning), a first  
10          filtering operation, a discrete differentiation operation that includes raw phase extraction, followed by  
a second filtering operation. The algorithm for finding the SSC modulation profile does not require the  
12          high-speed digital channel to meet Nyquist sampling requirements.